Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.–13. (Canceled)

14. (Currently Amended) A system for maintaining an IC-module under test near a constant set-point temperature while electrical power dissipation in said IC-module is varied; said system being comprised of:

a container having an open end with a seal for pressing against said IC-module while said IC-module is under test, said container being detachable from said IC-module;

at least one nozzle, in said container, for spraying a liquid coolant on said IC-module when said seal is pressed against said IC-module;

a ~~pressure-reducing means,~~ vacuum pump coupled to said container, for producing a sub-atmospheric pressure between said container and said IC-module when said seal is pressed against said IC-module during testing; and[[,]]

a pressure regulator for maintaining said sub-atmospheric pressure ~~such that the boiling point of said liquid coolant is lower by at least 10°C from its boiling point at atmospheric pressure,~~ while the temperature of said IC-module is kept near said set-point.

15. (Currently Amended) A system according to claim 14 wherein said pressure ~~reducing means~~ regulator reduces said sub-atmospheric pressure to a point where ~~essentially all of~~ said liquid coolant from each nozzle rapidly vaporizes when it hits said IC-module.

16. (Previously Presented) A system according to claim 15 which further includes a circulation subsystem, coupled to each nozzle, that holds said liquid coolant; and wherein said liquid coolant consists essentially of water.

17. (Previously Presented) A system according to claim 14 which includes multiple nozzles at spaced-apart locations in said container, and each nozzle includes a means

for receiving one control signal and a means for ejecting just a single droplet of said liquid coolant when it receives said one control signal.

18. (Previously Presented) A system according to claim 17 which further includes a closed-loop control means for: a) receiving a sensor signal representing a sensed temperature of said IC-module, and b) send said control signal to all of said nozzles simultaneously with a frequency that increases as the differences between said sensed temperature and said set-point increases.

19. (Previously Presented) A system according to claim 17 which further includes a closed-loop control means for: a) receiving a sensor signal representing a sensed temperature of said IC-module, b) sending said control signal to a subset of said nozzles simultaneously, and c) increasing the number of nozzles in said subset as the difference between said sensed temperature and said set-point increase.

20. (Previously Presented) A system according to claim 17 wherein said means for ejecting in each nozzle ejects said single droplet by squeezing said coolant with a piezoelectric device.

21. (Previously Presented) A system according to claim 17 wherein said means for ejecting in each nozzle ejects said single droplet by heating said coolant with an electric heater.

22. (Previously Presented) A system according to claim 15 wherein each nozzle includes a means for receiving one control signal and a means for spraying multiple droplets of said liquid coolant when it receives said one control signal.

23. (Previously Presented) A system according to claim 22 which further includes a closed-loop control means for: a) receiving a sensor signal representing a sensed temperature of said IC-module, and b) sending said control signal with an ON-OFF ratio that increases as the difference between said sensed temperature and said set-point increases.

24. (Previously Presented) A system according to claim 15 wherein said seal is shaped to encircle a surface on said IC-module which encloses an IC-chip.

25. (Previously Presented) A system according to claim 15 wherein said seal is shaped to encircle an exposed surface on an IC-chip in said IC-module.

26. (New) A system according to claim 14, wherein said pressure regulator maintains said sub-atmospheric pressure such that the boiling point of said liquid coolant is lower by at least 10°C from its boiling point at atmospheric pressure.

27. (New) A system for maintaining an IC-module near a set-point temperature while electrical power dissipation in said IC-module is varied; said system being comprised of:

a container having an open end with a seal for pressing against said IC-module;

a closed loop cooling system to remove heat from said IC-module comprising:

at least one nozzle, in said container, for spraying a liquid coolant on said IC-module when said seal is pressed against said IC-module;

a condenser coupled to the container to receive and condense vaporized coolant from the container;

a vacuum pump coupled to said container, for producing a sub-atmospheric pressure between said container and said IC-module when said seal is pressed against said IC-module; and

a pressure regulator for maintaining said sub-atmospheric pressure while the temperature of said IC-module is kept near said set-point;

one or more heating elements to add heat to said IC-module when the power dissipated by said IC-module decreases by an amount that would cool said IC-module below said set point;

a controller configured to control said closed loop cooling system and said one or more heating elements to maintain the temperature of said IC-module at or near said set point.

28. **(New)** A system according to claim 27 wherein said pressure regulator reduces said sub-atmospheric pressure to a point where said liquid coolant from each nozzle rapidly vaporizes when it hits said IC-module.

29. **(New)** A system according to claim 28, wherein said liquid coolant consists essentially of water.

30. **(New)** A system according to claim 27, which includes multiple nozzles at spaced-apart locations in said container, and each nozzle includes a means for receiving a control signal from said controller and a means for ejecting just a single droplet of said liquid coolant when it receives said control signal.

31. **(New)** A system according to claim 30, wherein said controller is configured to: a) receive a sensor signal representing a sensed temperature of said IC-module, and b) send said control signal to all of said nozzles simultaneously with a frequency that increases as the differences between said sensed temperature and said set-point increases.

32. **(New)** A system according to claim 30, wherein said controller is configured to: a) receive a sensor signal representing a sensed temperature of said IC-module, b) send said control signal to a subset of said nozzles simultaneously, and c) increase the number of nozzles in said subset as the difference between said sensed temperature and said set-point increase.

33. **(New)** A system according to claim 30 wherein said means for ejecting in each nozzle ejects said single droplet by squeezing said coolant with a piezoelectric device.

34. **(New)** A system according to claim 30 wherein said means for ejecting in each nozzle ejects said single droplet by heating said coolant with an electric heater.

35. **(New)** A system according to claim 27 wherein each nozzle includes a means for receiving one control signal and a means for spraying multiple droplets of said liquid coolant when it receives said one control signal.

36. **(New)** A system according to claim 27 wherein said controller is configured to: a) receive a sensor signal representing a sensed temperature of said IC-module, and b) send said control signal with an ON-OFF ratio that increases as the difference between said sensed temperature and said set-point increases.

37. **(New)** A system according to claim 27 wherein said seal is shaped to encircle a surface on said IC-module which encloses an IC-chip.

38. **(New)** A system according to claim 27 wherein said seal is shaped to encircle an exposed surface on an IC-chip in said IC-module.

39. **(New)** A system according to claim 27, wherein said pressure regulator maintains said sub-atmospheric pressure such that the boiling point of said liquid coolant is lower by at least 10°C from its boiling point at atmospheric pressure.

40. **(New)** A system according to claim 27, wherein said heater comprises one or more infrared heating elements disposed in said container.

41. **(New)** A system according to claim 27, wherein said infrared heating elements are interleaved with a plurality of nozzles.

42. **(New)** A system according to claim 27, wherein said infrared heating elements surround a cluster of nozzles.

43. **(New)** A system according to claim 27, wherein said container is detachable from said IC-module.

44. **(New)** A system according to claim 23, wherein said system maintains said IC-module near a constant set-point temperature while said IC-module is under test.